PRELIMINARY AMENDMENT

Serial Number: 10/662,620

Filing Date: September 15, 2003

Title: A NOVEL PROCESS FOR THE PREPARATION OF ALDEHYDE FROM A PROTEINOUS SOURCE.

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IN THE CLAIMS

Please amend claim 1 and add new claims 8-20.

- 1. (Currently Amended) A process for preparing aldehyde having molecular weight in the range of 3000-5000 D from a proteinous material for industrial applications, said process comprising the steps of:
- i) subjecting the proteinous material to hydrolysis to obtain protein hydrolysate and sterilizing the protein hydrolysate to obtain sterilized protein hydrolysate,
- ii) treating the sterilized protein hydrolysate, as formed in step (i), with 0.25-0.5% w/w of alkyl halide sodium borohydride for a time period in the range of 20-30 minutes at a pH of 6-7 and adjusting the pH of the same in the range of 3-5 to obtain an alcohol containing slurry,
- iii) reacting the alcohol containing slurry of step (ii), with 0.01 -0.5% w/w, of an organo-oxidising agent at a temperature in the range of 20-35°C followed by adjusting the pH of the resulting solution in the range of 5-7 to obtain an aldehyde containing solution [[.]] : and
 - iv) separating the aldehyde containing solution, as formed in step (iii), to obtain aldehyde.
- 2. (Original) The process as claimed in claim 1, wherein the proteinous material used is selected from fleshings, skin trimmings or keratin.
- 3. (Original) The process as claimed in claim 1 wherein in step (i), the proteinous material is hydrolyzed by alkali hydrolysis, acid hydrolysis or enzymatic hydrolysis.
- 4. (Original) The process as claimed in claim 1 wherein in step (i), the hydrolyzed protein material is sterilized using gamma radiation, ultraviolet radiation or autoclaving.
- 5. (Original) The process as claimed in claim 1 wherein in step (iii) the organo-oxidizing agent used is selected from potassium permanganate, pyridinium chloro chromate or sodium hypochlorite.

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6. (Original) The process as claimed in claim 1 wherein in step (iv), the aldehyde containing solution is separated using dialysis, resin absorption or ion exchange.

- 7. (Original) The process as claimed in claim 1, wherein the aldehyde thus obtained can be stored for more than 1 year.
- 8. (New) A process for preparing an aldehyde having a molecular weight of about 3000-5000 Daltons from a proteinous material, said process comprising the steps of:
 - i) subjecting the proteinous material to hydrolysis to obtain protein hydrolysate;
- ii) treating the protein hydrolysate formed in step (i), with sodium borohydride at a pH of about 6-7 and adjusting the pH to about 3-5 to obtain an alcohol-containing slurry;
- iii) reacting the alcohol-containing slurry of step (ii), with an organo-oxidizing agent followed by adjusting the pH of the resulting solution to about 5-7 to obtain an aldehydecontaining solution.
- 9. (New) The process of claim 8, wherein the proteinous material used is derived from fleshings, skin trimmings, or keratin.
- 10. (New) The process of claim 8 wherein in step (i), the proteinous material is hydrolyzed by alkali hydrolysis, acid hydrolysis, or enzymatic hydrolysis.
- 11. (New) The process of claim 8 wherein in step (i), the protein hydrolysate is sterilized to provide sterilized protein hydrolysate.
- 12. (New) The process of claim 11 wherein the hydrolyzed protein material is sterilized using gamma radiation, ultraviolet radiation, or autoclaving.
- 13. (New) The process of claim 8 wherein in step (ii), about 0.25-0.5% w/w of sodium

borohydride is employed.

14. (New) The process of claim 8 wherein in step (ii), the protein hydrolysate is treated with sodium borohydride for about 20-30 minutes.

- 15. (New) The process of claim 8 wherein in step (iii), about 0.01 to about 0.5% w/w, of the organo-oxidizing agent is employed.
- 16. (New) The process of claim 8 wherein in step (iii) the organo-oxidizing agent is potassium permanganate, pyridinium chlorochromate, or sodium hypochlorite.
- 17. (New) The process of claim 8 wherein in step (iii), the alcohol-containing slurry of step (ii) is contacted with the organo-oxidizing agent at a temperature of about 20 °C to about 35 °C.
- 18. (New) The process of claim 8 wherein in the aldehyde is isolated from the aldehydecontaining solution of step (iii).
- 19. (New) The process of claim 18 wherein the aldehyde is isolated from the aldehydecontaining solution using dialysis, resin absorption, or ion exchange.
- (New) The process of claim 19, wherein the aldehyde thus obtained is stable for more than about 1 year.